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PRE-APPEAL BRIEF REQUEST FOR REVIEW

Docket Number (Optional)
ATH-0073

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Typed or printed name

Appln. No 10/086,029 | Filed 02/27/2002
First Named Inventor Nancy Cam-Winget
Art Unit 2131 | Examiner Syed Zia

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a notice of appeal.

The review is requested for the reasons(s) stated on the attached sheet(s).
Note: No more than five (5) pages may be provided.

I am the

☐ applicant/inventor.

Signature: Jeanette S. Harms, Esq.

☐ assignee of record of the entire interest.
See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed.
(Form PTO/SB/96)

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Date October 3, 2007

Registration number if acting under 37 CFR 1.34 _____

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required.
Submit multiple forms if more than one signature is required, see below*.

☐ *Total of forms are submitted.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Nancy Cam-Winget et al.

Assignee: Atheros Communications, Inc.

Title: Key Refresh At The MAC Layer

Serial No.: 10/086,029 File Date: February 27, 2002

Examiner: Syed Zia Art Unit: 2131

Docket No.: ATH-0073

Date: October 3, 2007

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Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

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The Examiner's rejection of Claims 1-41 is in clear error. Claims 1-41 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 5,706,348 (Gray).

REMARKS

This Pre-Appeal Brief is filed in response to the Advisory Action dated September 17, 2007, which has a shortened statutory period set to expire September 13, 2007. An extension of time of one month is included, thereby allowing Applicant to respond by October 13, 2007.

Claims 1-41 Are Patentable Over Gray

Applicant respectfully submits that Gray fails to disclose or suggest that a new encryption key derivation is controlled by a MAC sub-layer.

Specifically, Claim 1 recites (emphasis added),

> sending from a first transceiver to a second transceiver a request to initiate derivation of a new encryption key, the request to **initiate a new encryption key derivation being controlled by a MAC sub-layer** and including an exchange threshold indicative of when the new encryption key is to be used to encrypt communication packets.

Claim 26 recites (emphasis added),

> a physical control layer that sends to the second transceiver a request to initiate derivation of a new encryption key, the request to **initiate a new encryption key derivation being controlled by a MAC sub-layer** and including an exchange threshold indicative of when the new encryption key is to be used to encrypt communication packets.

Claim 37 recites (emphasis added),

> a physical control layer that receives from the second transceiver a request to initiate derivation of a new encryption key, the request to **initiate a new encryption key derivation being controlled by a MAC sub-layer** and including an exchange threshold indicative of when the new encryption key is to be used to encrypt communication packets, and a first nonce needed to derive the new encryption key.

As taught by Applicant in paragraph [0006] of the Specification, a presentation layer or a session layer is typically used to initiate encrypted communication. The presentation and the session layers are higher OSI (Open System Interconnection) layers than the MAC sub-layer, which forms part of the data link layer. See, e.g. presentation layer 106, session layer 105, and data link layer 102 of Figure 1. As

further taught by Applicant in paragraph [0007] of the Specification:

> because MAC sub-layer 102A currently does not provide a mechanism to communicate to the higher layer that the key needs to be updated, the higher layer must redundantly store this information, monitor the state of the key (i.e. its location in the key space), and update the key independent of any communication with MAC sub-layer 102A. Moreover, because there is no defined protocol to update the key, the higher layer merely supplants the old key with a new key, thereby causing traffic disruption. Finally, the higher layer does not control communications regarding the data packet granularity (which is provided by MAC sub-layer 102A). Thus, the higher layer is unable to predict when repetition of nonces occurs (also known as collisions), which can undermine security.

Advantageously, in the recited method for encrypted communications, the request to **initiate a new encryption key derivation is controlled by a MAC sub-layer**. Thus, by using the recited method, the higher layer need not store the information regarding a key that needs updating, monitor the state of the key, or update the key independent of any communication with the MAC sub-layer.

Applicant respectfully submits that Gray fails to teach a MAC sub-layer that initiates derivation of a new key encryption. Indeed, **Gray fails to mention anything regarding a MAC layer, much less its advantages in initiating key encryption**. Because Gray fails to disclose or suggest a request to initiate a new encryption key derivation **being controlled by a MAC sub-layer**, Applicant submits that the rejection of Claims 1, 26, and 37 is in clear error.

Claims 2-25 depend from Claim 1 and therefore are patentable for at least the reasons presented for Claim 1. Claims 27-36 depend from Claim 26 and therefore are patentable for at least the reasons presented for Claim 26. Claims 38-41

depend from Claim 37 and therefore are patentable for at least the reasons presented for Claim 37.

CONCLUSION

Claims 1-41 are pending in the present application. Allowance of these claims is respectfully requested.

Respectfully submitted,

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